

# PATENT SPECIFICATION



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## PROVISIONAL SPECIFICATION.

### Improvements in or relating to Trunks, Suitcases and the like.

I, ABE MILLER, of 181, New North Road, London, N. 1, a British Subject, do hereby declare the nature of this invention to be as follows:—

5 This invention relates to trunks, suitcases and the like, and has for its objects to strengthen the structure where joined at its edges and to present a neat appearance.

10 It is usual for those parts of a suitcase or the like which constitute the ends, top and bottom to be seamed together, if of leather, or to be bent over and sewn or riveted together, if of compressed fibre or the like.

15 Whilst these methods may be satisfactory, when the suitcase or the like is new, the stitches are liable to tear out after the article has been in use for some time, and compressed fibre or the like is liable to break where it is weakened to form a right-angled bend. In accordance with the present invention however, the margins of the parts to be united are received in grooves formed in 20 angle pieces which have been bent up from sheet metal so as to present overlying and underlying flanges and, if desired, the margins of the parts may be riveted to said angle pieces, e.g. to the 25 underlying flanges thereof.

The angle pieces may be bent each from a single strip of metal so as to present, at the required angle to one another, grooves to receive the margins of two 35 pieces of material, or in some cases said angle pieces may be constituted each by two or more strips of metal suitably bent and interconnected.

According to one form of this invention 40 an angle piece is formed from a strip of sheet metal bent to a rounded right angle along its longitudinal centre line, each half being retroverted towards said centre line and then bent outwards again, the 45 double thickness of metal presented as a result of the first retroversion constitut-

ing the overlying flange and the outwardly bent single thickness of metal resulting from the final bend presenting the underlying flange which is spaced suitably from the overlying flange to accommodate the thickness of the material of which the suitcase or the like is to be made. This underlying flange extends further from the longitudinal centre line than does the overlying flange so that after the margin of a panel of leather, compressed fibre, or the like has been inserted between a pair of flanges, it may be riveted to the underlying flange.

According to a modification of this invention, the underlying flanges are formed from separate strips of metal. In this case a strip of metal is bent to a rounded right angle along its longitudinal centre line, and its edges are retroverted towards, and almost up to said centre line; two other strips are retroverted each at one edge which is interlocked with a retroverted edge of the first part, the retroverted parts of the first strip constituting the overlying flanges whilst the main portions of each of the two other parts constitute the underlying flanges.

The ends of the corner strips of this invention are covered by the usual leather capped corners and in a suitcase of small dimensions the rivets used for the corner caps serve also to secure the panels to the underlying flanges, but in a large suitcase or a trunk additional rivets between said corner caps may be found necessary.

A suitcase or the like built up in accordance with this invention is very strong, not only on account of the metal framework provided at its edges, but also because of the absence of seaming or bent and weakened fibre at the edges.

Dated the 6th day of May, 1929.

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## COMPLETE SPECIFICATION.

### Improvements in or relating to Trunks, Suitcases and the like.

I, ABE MILLER, of 181, New North 90 Road, London, N. 1, a British Subject,

do hereby declare the nature of this invention and in what manner the same is

to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to trunks, suitcases and the like, and has for its object to strengthen the structure where joined at its edges and to present a neat appearance.

It is usual for those parts of a suitcase or the like which constitute the ends, top or bottom to be seamed together, if of leather, or to be bent over and sewn or riveted together, if of compressed fibre or the like. Whilst these methods may be satisfactory, when the suitcase or the like is new, the stitches are liable to tear out after the article has been in use for some time, and compressed fibre or the like is liable to break where it is weakened to form a right-angled bend. It has been proposed, in the case of sheets of material forming the sides of boxes which do not extend so far as the intersection of the planes on which they lie, to retrovert the margins of such sheets of material and to engage them with the retroverted edges of sheet metal angle pieces, whilst, in cases where the margin of one sheet overlaps the edge of another sheet metal strips have been bent to constitute angle pieces with grooves to receive the margins of said sheets. In accordance with the present invention however, the areas of the sides (including the sides proper, ends, top and bottom), terminate short of the intersection of the planes in which they lie, whilst said sides are received in grooves formed in angle pieces which have been bent up each from one or more strips of sheet metal so as to present overlying and underlying flanges, and so as to leave a springy corner, and if desired, the margins of the parts may be riveted to said angle pieces, e.g. to the underlying flanges thereof.

The angle pieces may be bent each from a single strip of metal so as to present, at the required angle to one another, grooves to receive the margins of two pieces of material, or in some cases said angle pieces may be constituted each by two or more strips of metal suitably bent and interconnected.

In the accompanying drawings Figure 1 is a perspective view of one form of suitcases made in accordance with this invention; Figure 2 is an enlarged diagrammatic sectional view on the line 2—2, Figure 1, the positions of the parts being exaggerated for the sake of clearness, and Figures 3, 4 and 5 are similar views to Figure 2, but showing modifications of the invention.

According to the form of the invention shown in Figures 1 and 2 the junctions

between the ends such as *a b* of the lid and body of a suitcase with the top and bottom such as *c* thereof respectively, as well as the junctions between the ends such as *b* of the body and the back and front such as *d* thereof, respectively, are reinforced by metal angle pieces into which fit the walls in question. An angle piece is formed from a strip of sheet metal *e* bent to a rounded right angle along its longitudinal centre line as shown in Figure 2, each half being retroverted towards said centre line as at *f* and then bent outwards again as at *g*, the double thickness of metal *e f* presented as a result of the first retroversion constituting an overlying flange and the outwardly bent single thickness of metal *g* resulting from the final bend presenting an underlying flange which is spaced suitably from the overlying flange *e f* to accommodate the thickness of the material of which the suitcase or the like is to be made. The underlying flange *g* extends further from the longitudinal centre line than does the overlying flange *e f* so that after the margin of a panel of leather, compressed fibre, or the like has been inserted between a pair of flanges, it may be riveted to the underlying flange.

Where the suitcase is a small one the rivet for securing the material to the flange *g* may be a rivet such as *h* by which are secured leather capped corners *j . . .* for covering the ends of the angle pieces, but in a large suitcase or a trunk an additional rivet or rivets (as indicated in broken lines at *k* in Figure 2) between said corner caps *j . . .* may be found necessary.

Although no angle pieces are shown at junctions between the top and bottom and the front and back walls of the lid and body, respectively, of the suitcase, it is to be understood that such may be provided if desired.

According to the modification of this invention shown in Figure 3, the underlying flanges are formed from separate strips of metal. In this case a strip of metal *e* is bent to a rounded right angle along its longitudinal centre line, and its edges are retroverted as at *f*, towards, and almost up to, said centre line; two other strips *m m* are retroverted each at one edge as at *n* which is interlocked with a retroverted edge *f* of the part *e*, the parts of the strip *e* constituting the overlying flanges *e f* whilst the main portions *m* of each of the two other parts constitute the underlying flanges. As shown the material *a c* is also retroverted and interlocked with the retroverted edges *f f*.

The forms of the invention shown in Figures 4 and 5 correspond with those

shown in Figures 2 and 3 but illustrate how the material *a c* may be interlocked with the underlying flange. As depicted in Figure 4 a strip of metal *e* is bent to 5 a rounded right angle along its longitudinal centre line, its edges are retroverted towards said centre line as at *o*, then bent outwards again to a greater extent as at *p* and finally retroverted 10 towards said line as at *q* on the outer side of the parts *p*. The edges of the material *a c* are retroverted as at *r*, the main part *a* or *c* lying between the parts *o* and *q* whilst the retroverted parts *r* lie between 15 the parts *p* and *q*.

The form of the invention shown in Figure 5 is similar to that shown in Figure 3 but the parts *m m* are retroverted as at *s s* and the retroverted 20 margins *r r* of the material *a c* are interlocked therewith.

A suitcase or the like built up in accordance with this invention is very strong, not only on account of the metal framework provided at its edges, but also 25 because of the absence of seaming or bent and weakened fibre at those edges which are most liable to strain.

In the appended claims the word 30 "sides" is intended to include sides proper, ends, top and bottom.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to 35 be performed, I declare that what I claim is:—

1. A suitcase or the like in which the areas of the sides terminate short of the intersection of the planes in which they lie, whilst said sides are received in grooves formed in angle pieces which have been bent up each from one or more strips of sheet metal so as to present overlying and underlying flanges, and so as to leave a springy corner. 40

2. A suitcase or the like, as claimed in Claim 1, wherein the underlying flanges are formed from suitably bent strips interlocked with the angle pieces proper. 45

3. A suitcase or the like as claimed in Claim 1 or in Claim 2, wherein the margins of the parts of the material of which the case is made are retroverted and interlocked with the angle piece as a whole. 50

4. A suitcase or the like, as claimed in Claim 1, wherein the angle pieces are formed substantially as hereinbefore set forth with reference to Figure 2, or to Figure 3, or to Figure 4, or to Figure 5 of the accompanying drawings. 55

5. Material for reinforcing the edges of suitcases and the like, substantially as hereinbefore set forth with reference to Figures 2, 3, 4 or 5 of the accompanying drawings. 60

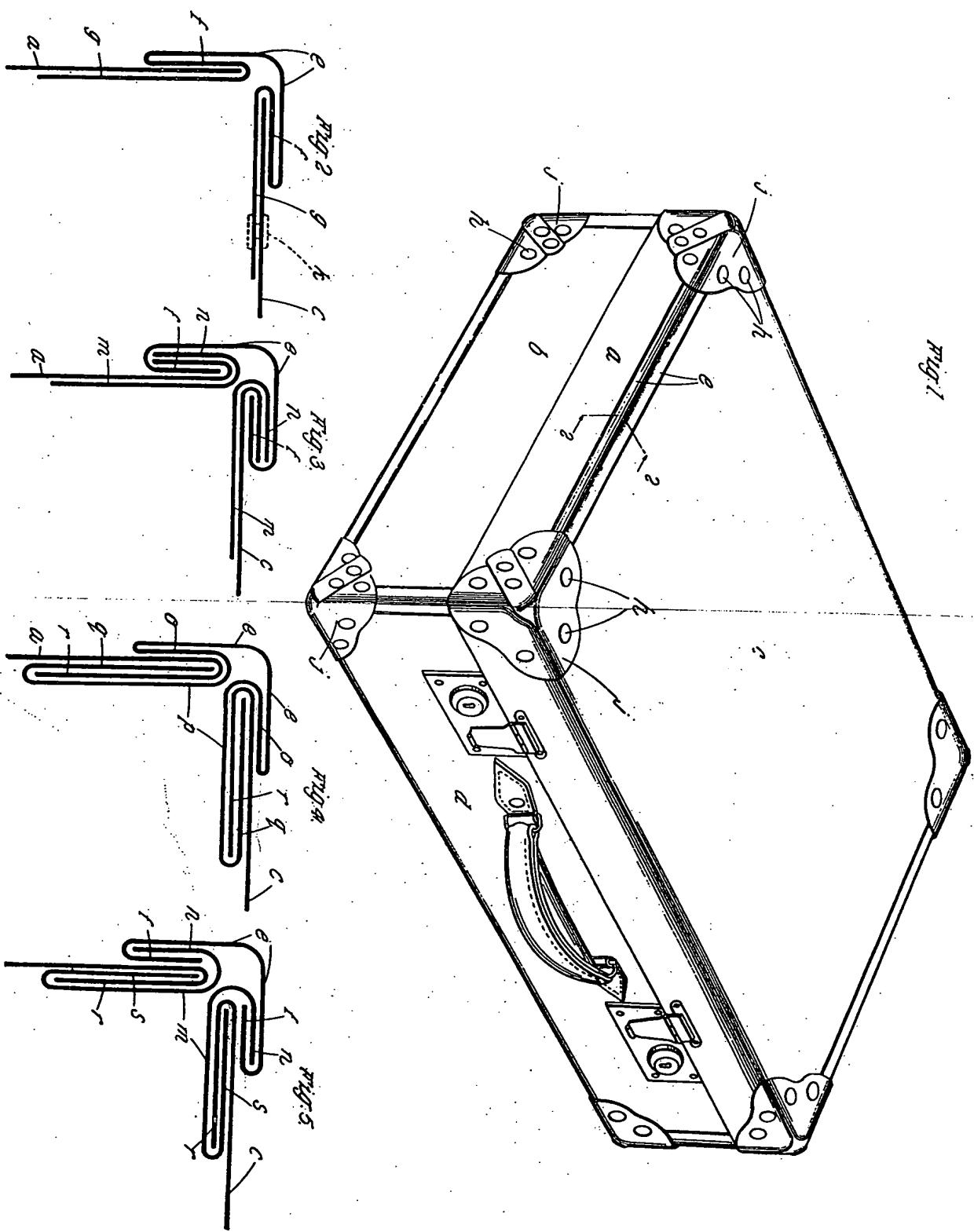
Dated the eighth day of August, 1929.

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*[This Drawing is a reproduction of the Original on a reduced scale.]*



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